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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,863	08/07/2001	Seung Jong Choi	3449-0170P	8526
2292	7590	07/15/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			NATNAEL, PAULOS M	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/922,863	CHOI, SEUNG JONG
	Examiner	Art Unit
	Paulos M. Natnael	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 March 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-10 is/are allowed.
 6) Claim(s) 11-20 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

1. Amended drawings filed April 22, 2004 are herein acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **11-16, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chui et al**, U.S. Pat. No. 5,604,824.

Considering claim **11**, a data processing device in a digital TV, comprising:

a) a bit map converter for determining whether the text data is bit map data, and converting the text data into the bit map data based upon the determined result, is met by Format converter 12, figures 1 and 3a, which includes the bit determination device. (see col. 6, lines 65-67, for example)

b) a bit map compressor for compressing the bit map data by using a predetermined compression coding, is met by compressor 20, fig.1;

- c) a bit map decompressor for reading the compressed bit map data from the memory for restoring the read data back to its original bit map data, is met by decompressor 40, fig.1.
- d) a format converter for converting the format of the decompressed bit map data to correspond with display resolution, is met by format converter 32, fig.1;
except for;
- e) the claimed digital TV display.

Chui et al do not specifically discloses digital TV display. Chui however discloses " digital data stream as a source image data (col. 6, lines 65-67) and that "the output signal form the decompressor 40 is presented to format converter 32, which formats the decompressed document into the suitable form for display on video display 34d. col. 8, lines 22-27) Furthermore, Chui teaches that " digital processor for performing the decomposing of each frame of digital image information into the first and second pairs of low-frequency and high-frequency components by performing finite integer matrix multiplications of the digital image information using a scaling function and a corresponding wavelet function that do not require support outside of the digital image interval." (see col. 53, lines 19-25) therefore it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Chui et al by providing a digital display device so that the resolution of the displayed image is enhanced.

Considering claim 12, the device as defined in claim 11, wherein the text data is at least one among HTML data, DHTML data, XML data, SGML data and bit map data, is met by the disclosure on col. 4, lines 17-30 that teaches bit map data. (see also the disclosure on col. 1, lines 15-35)

Considering claim 13, the device as defined in claim 11, wherein the bit map converter converts the text data the bit map data if it is determined that the text data is not bit map data, is met by bit determination device 15 in figure 3a which is part of the format converter 12;

Regarding claim 14, see rejection of claim 13.

Considering claim 15, the device as defined in claim 11, wherein the predetermined compression coding is a run-length compression coding.

Chui et al disclose that "Compression of the document is performed by applying a scaling function and a wavelet function first in one direction (e.g., rows) and then in another direction (e.g., columns) to digital data representing the document." (Abstract of the disclosure) Chui does not specifically disclose a run-length compression coding. However, the run-length compression is well known in the art and as such it would be an obvious matter of a design choice to modify the reference by using the notoriously well-known run-length method of compression, since applicant has not disclosed that the run-length compression solves any stated problem or is for any particular purpose,

and it appears that any type of compression method such as disclosed above in the abstract would function equally well.

Considering claim **16**, wherein the conversion of the text data is carried out by using either first bit map data or second bit map data.

Regarding claim 16, the reference of Chui does not specifically disclose the conversion of the text data as being carried out by using either "the first bit map data" or "the second bit map data". However, given a reasonably broad interpretation, the examiner submits that the processing of the bit map data using one or the other, or one bit map data after another consecutively would be obvious to those with ordinary skill in the art. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Chui by providing a consecutive bit map conversion processing so that the conversion from text or document data would be less prone to error and as a result run more smoothly.

Considering claim **18**, see rejection of claim 11.

Considering claim **19**, see rejection of claim 16.

Considering claims **17 and 20**, the claimed wherein the format converter adjusts the resolution by integrating real number times to either a horizontal direction or a vertical direction of the decompressed bit map data;

Regarding claims 17 and 20, see Fig.3c which discloses symbolic substitution and byte packing methods. (see also columns 11-12)

Response to Arguments

4. Applicant's arguments with respect to claims 11-20 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

5. Claims 1-10 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose the following combination of an apparatus for an image display device in a digital TV comprising: a data processing part for executing bit map conversion, compression, restoration and format-conversion for character data to be displayed on the digital TV display; a memory for storing the bit map data obtained according to the conversion and compress in said data processing part and image data inputted from an arbitrary receiving part, the receiving part receiving one of digital image data and analog image data; an image outputting part for reading the image data from the memory, and, a display processing part for mixing the image data read from the image outputting part and the bit map data converted in format by the data processing part, as in claim 1;

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael
Primary Examiner
Art Unit 2614

July 11, 2005